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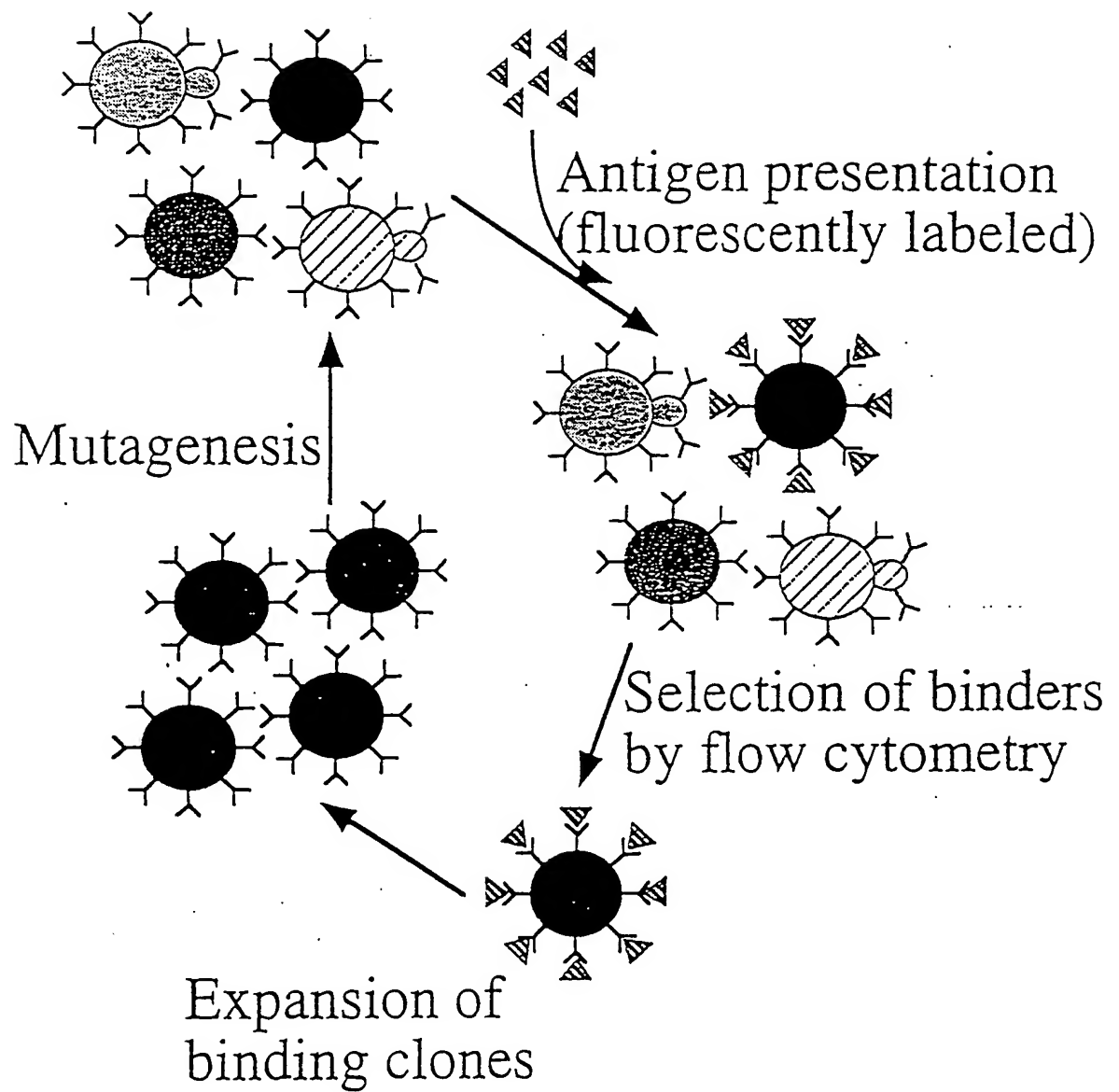


FIG. 1

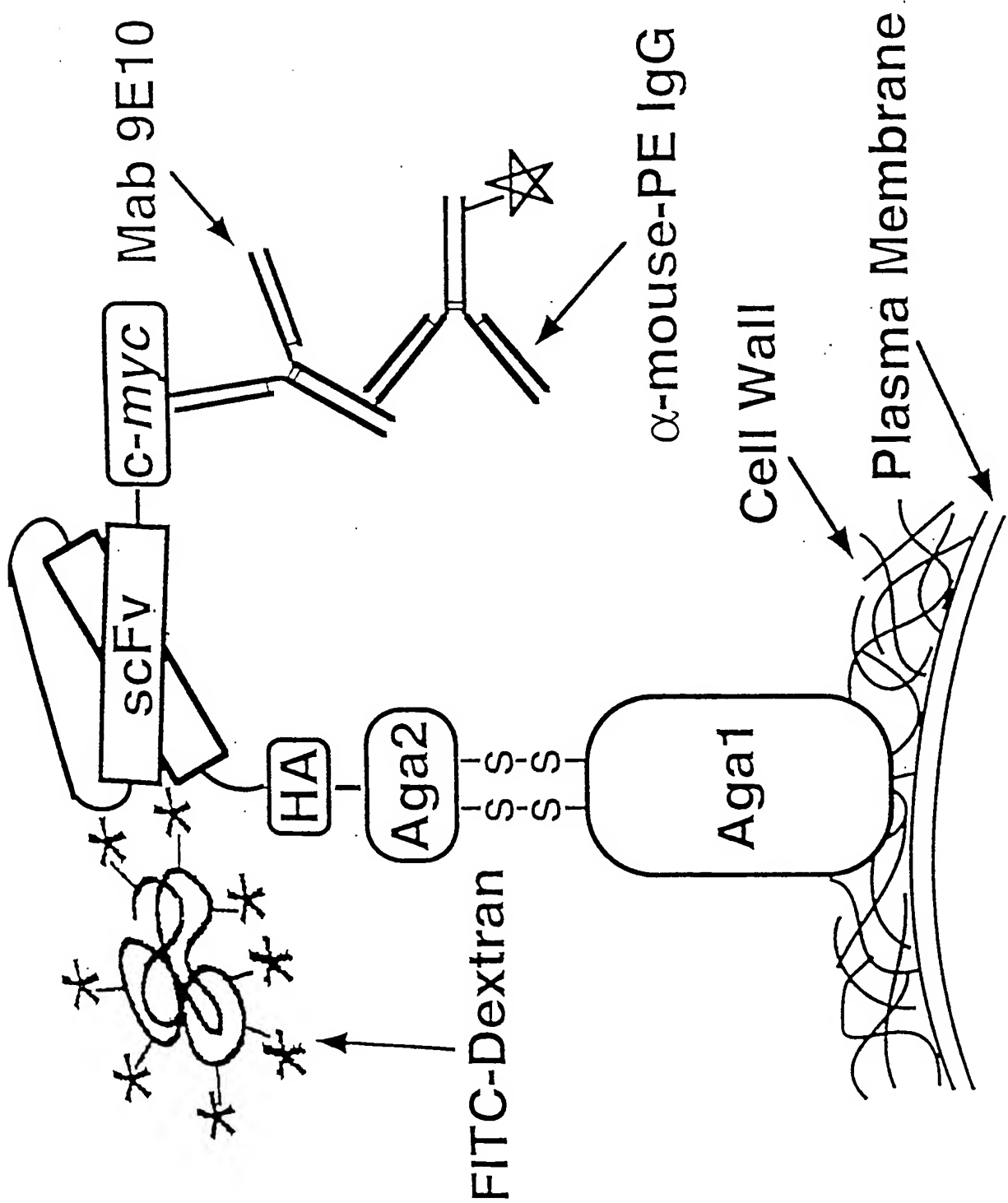


FIG. 2

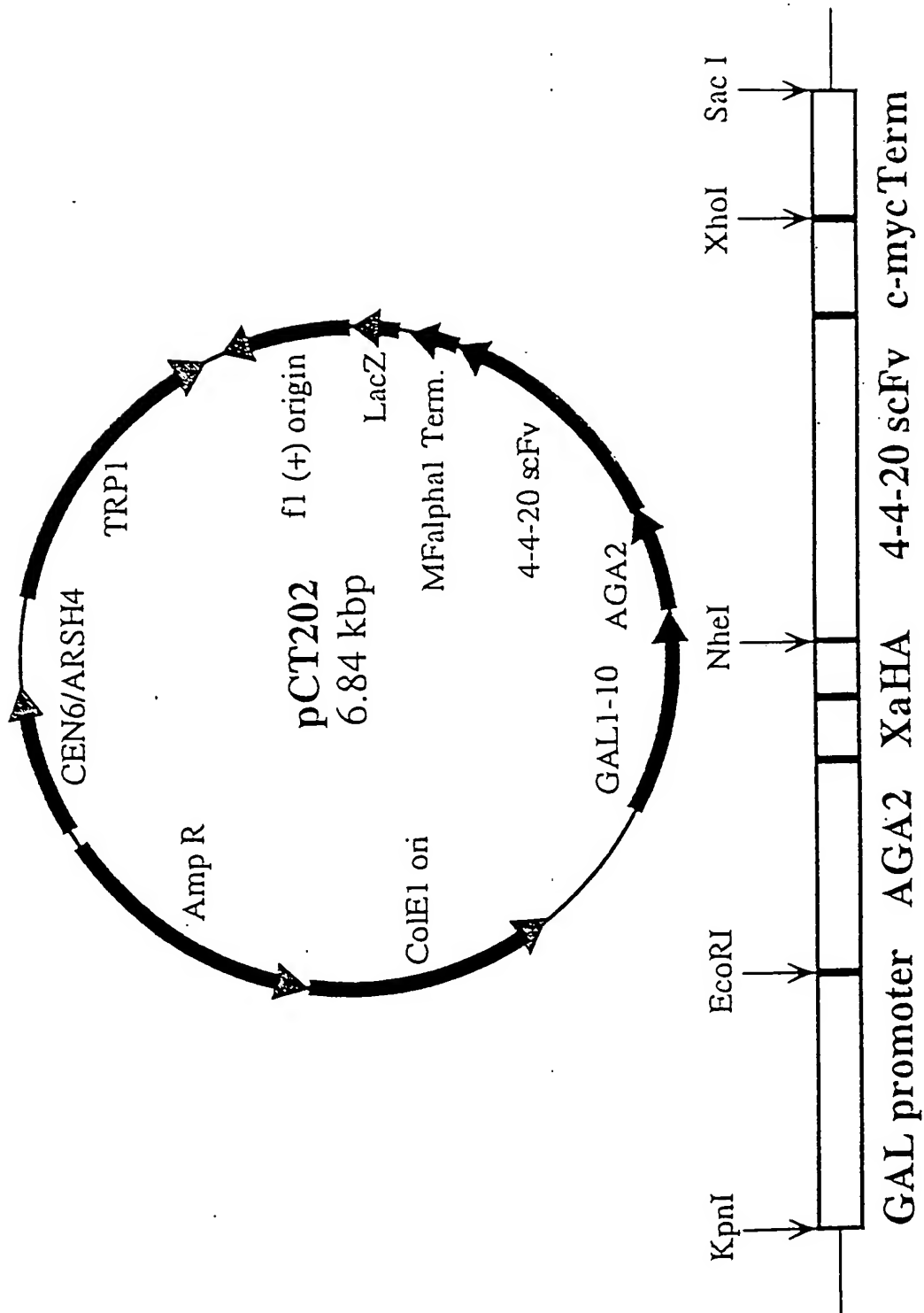


FIG. 3

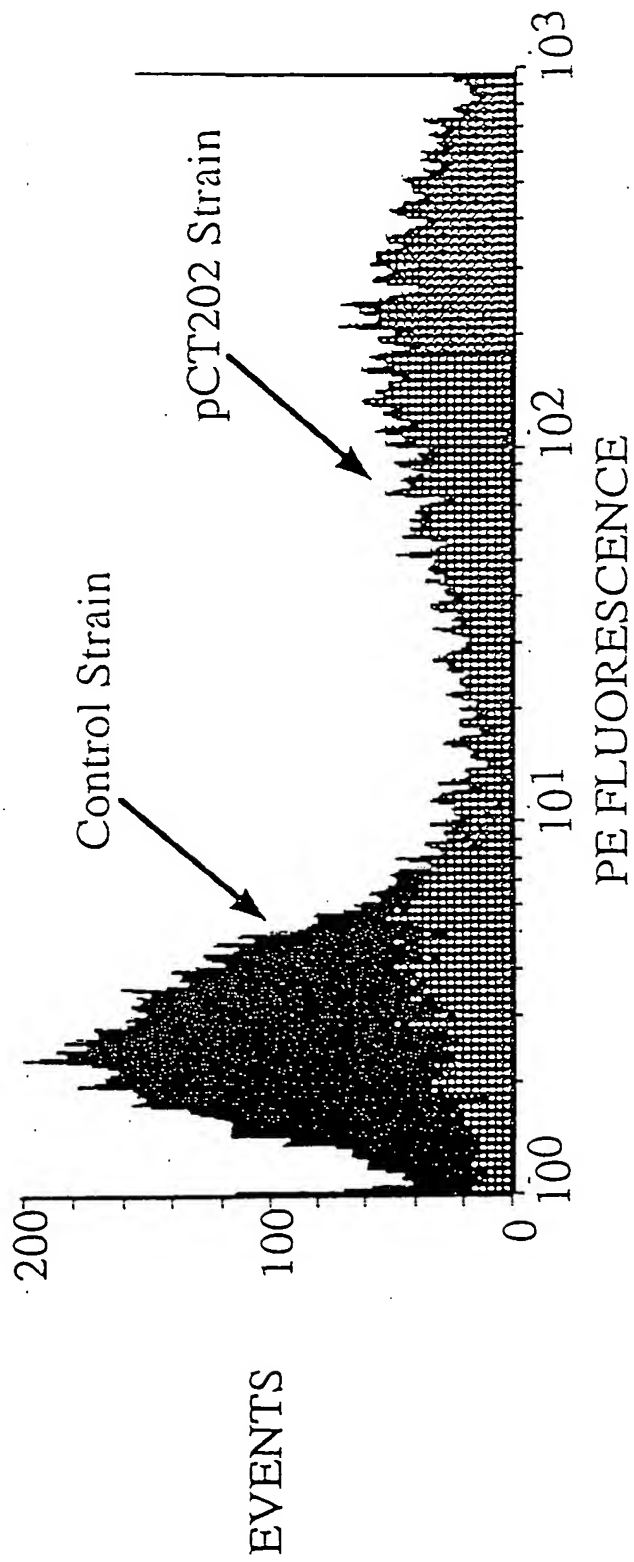


FIG.4

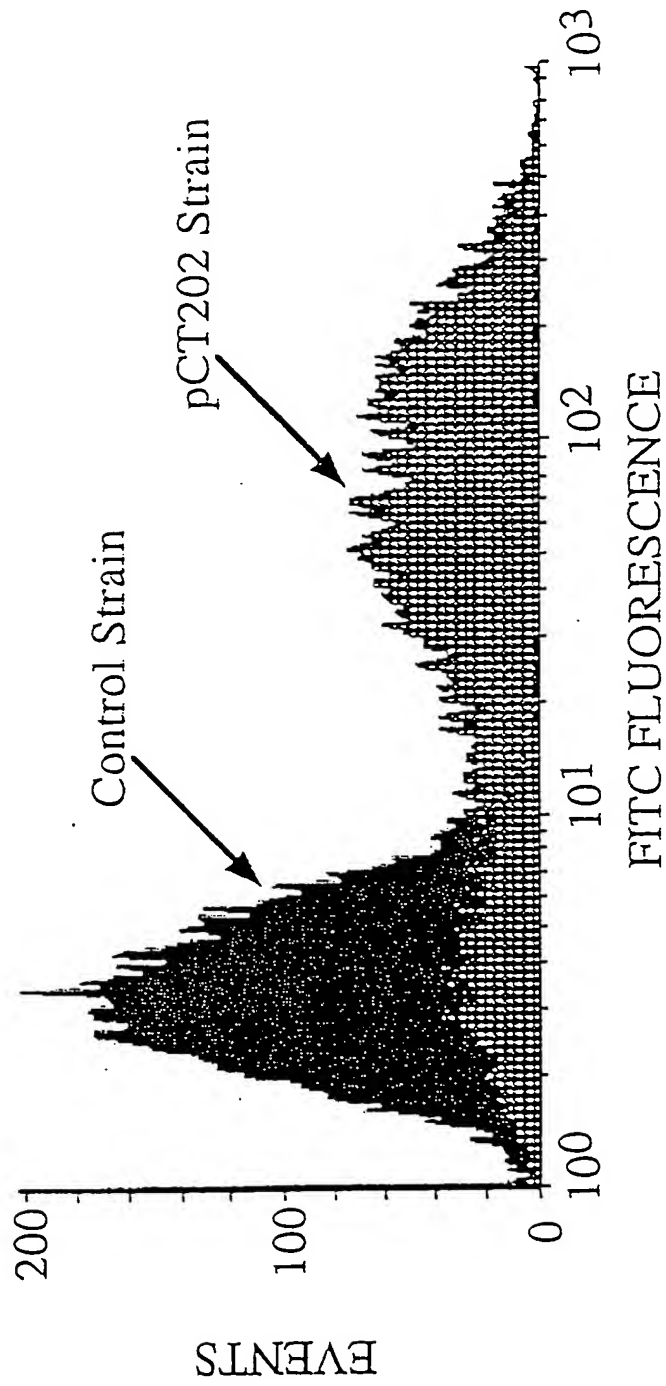


FIG. 5

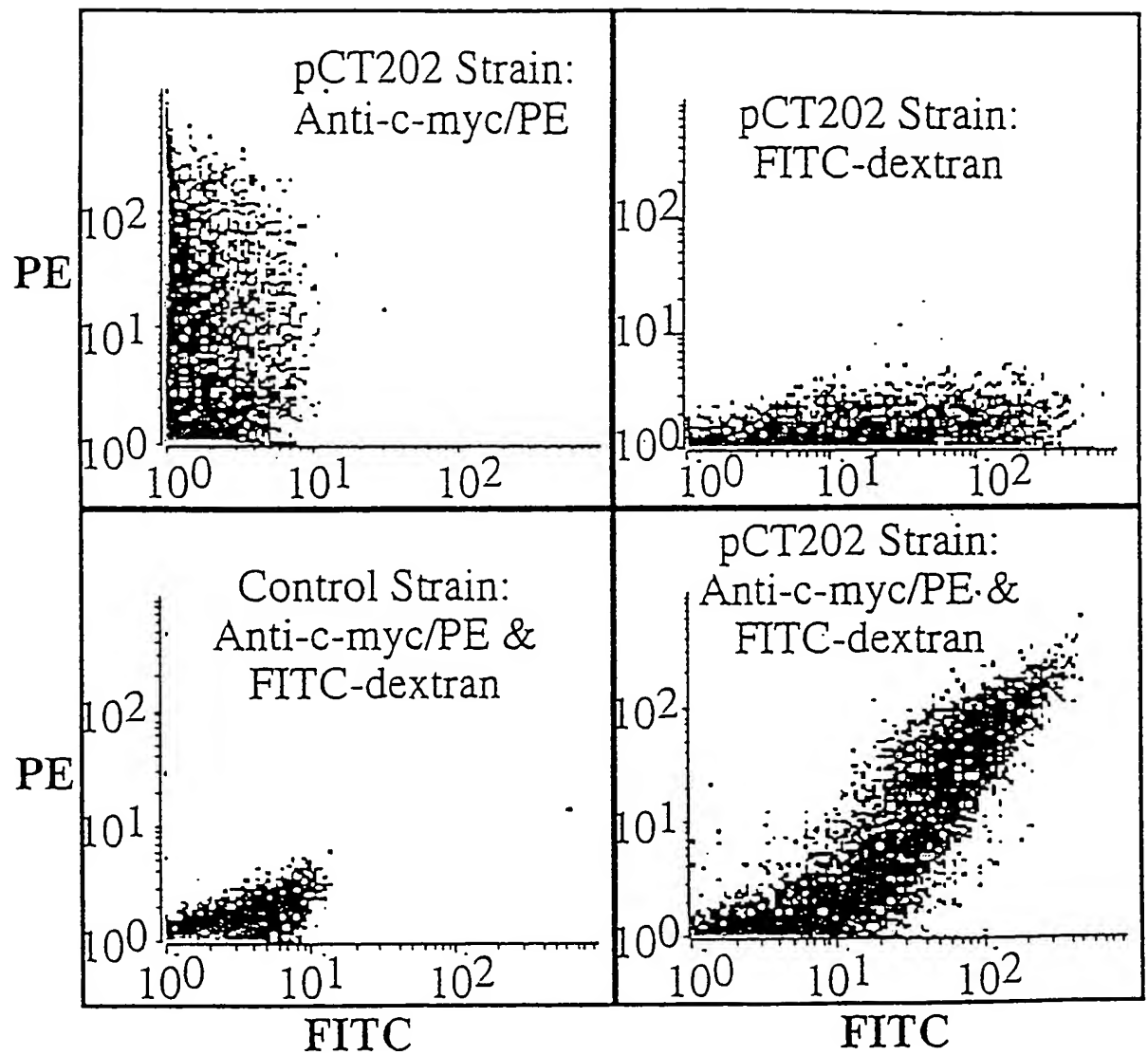


FIG. 6

```
1  ATTAGAATTC CCTACTTCAT ACATTTTCAA TTAAGATGCA GTTACTTCGC
51  TGTTTTTCAA TATTTTCTGT TATTGCTTCA GTTTTAGCAC AGGAACTGAC
101 AACTATATGC GAGCAAATCC CCTCACCAAC TTTAGAATCG ACGCCGTACT
151 CTTTGTCAAC GACTACTATT TTGGCCAACG GGAAGGCAAT GCAAGGAGTT
201 TTTGAATATT ACAAATCAGT AACGTTTGTC AGTAATTGCG GTTCTCACCC
251 CTCAACAACT AGCAAAGGCA GCCCCATAAA CACACAGTAT GTTTTTTAAGG
301 ACAATAGCTC GACGATTGAA GGTACATACC CATACGACGT TCCAGACTAC
351 GCTCTGCAGG CTAGCGACGT CGTTATGACT CAAACACCAC TATCACTTCC
401 TGTTAGTCTA GGAGATCAAG CCTCCATCTC TTGCAGATCT AGTCAGAGCC
451 TTGTACACAG TAATGGAAAC ACCTATTTAC GTTGGTACCT GCAGAAGCCA
501 GGCCAGTCTC CAAAGGTCCT GATCTACAAA GTTTCCAACC GATTTTCTGG
551 GGTCCCAGAC AGGTTTCAGTC GCAGTGGATC AGGGACAGAT TTCACACTCA
601 AGATCAGCAG AGTGGAGGCT GAGGATCTGG GAGTTTATTT CTGCTCTCAA
651 AGTACACATG TTCCGTGGAC GTTCGGTGGA GGCACCAAGC TTGAAATTAA
701 GTCCTCTGCT GATGATGCTA AGAAGGATGC TGCTAAGAAG GATGATGCTA
751 AGAAAGATGA TGCTAAGAAA CATGGTGACG TCAAACCTGGA TGAGACTGGA
801 GGAGGCTTGG TGCAACCTGG GAGGCCCATG AACTCTCCT GTGTTGCCTC
851 TGGATTCACT TTTAGTGA CTGGATGAA CTGGGTCCGC CAGTCTCCAG
901 AGAAAGGACT GGAGTGGGTA GCACAAATTA GAAACAAACC TTATAATTAT
951 GAAACATATT ATTCAGATTC TGTGAAAGGC AGATTCACCA TGTCAAGAGA
1001 TGATTCCAAA AGTAGTGTCT ACCTGCAAAT GAACAACTTA AGAGTTGAAG
1051 ACATGGGTAT CTATTACTGT ACGGGTTCTT ACTATGGTAT GGACTACTGG
1101 GGTCAAGGAA CCTCAGTCAC CGTCTCCTCA GAACAAAAGC TTATTTCTGA
1151 AGAAGACTTG TAATAGCTCG AG
```

FIG. 7

Inventor: Wittrup, et al. Filed: 12/16/03
USSN Not assigned Atty Docket 97-99E

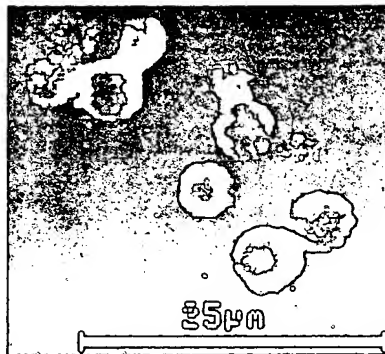
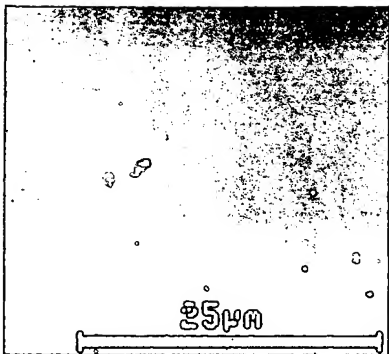


FIG. 8A

FIG. 8B

Yeast Cell Surface Display of Proteins
and Uses Thereof

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USSN Not assigned Atty Docket 97-99E

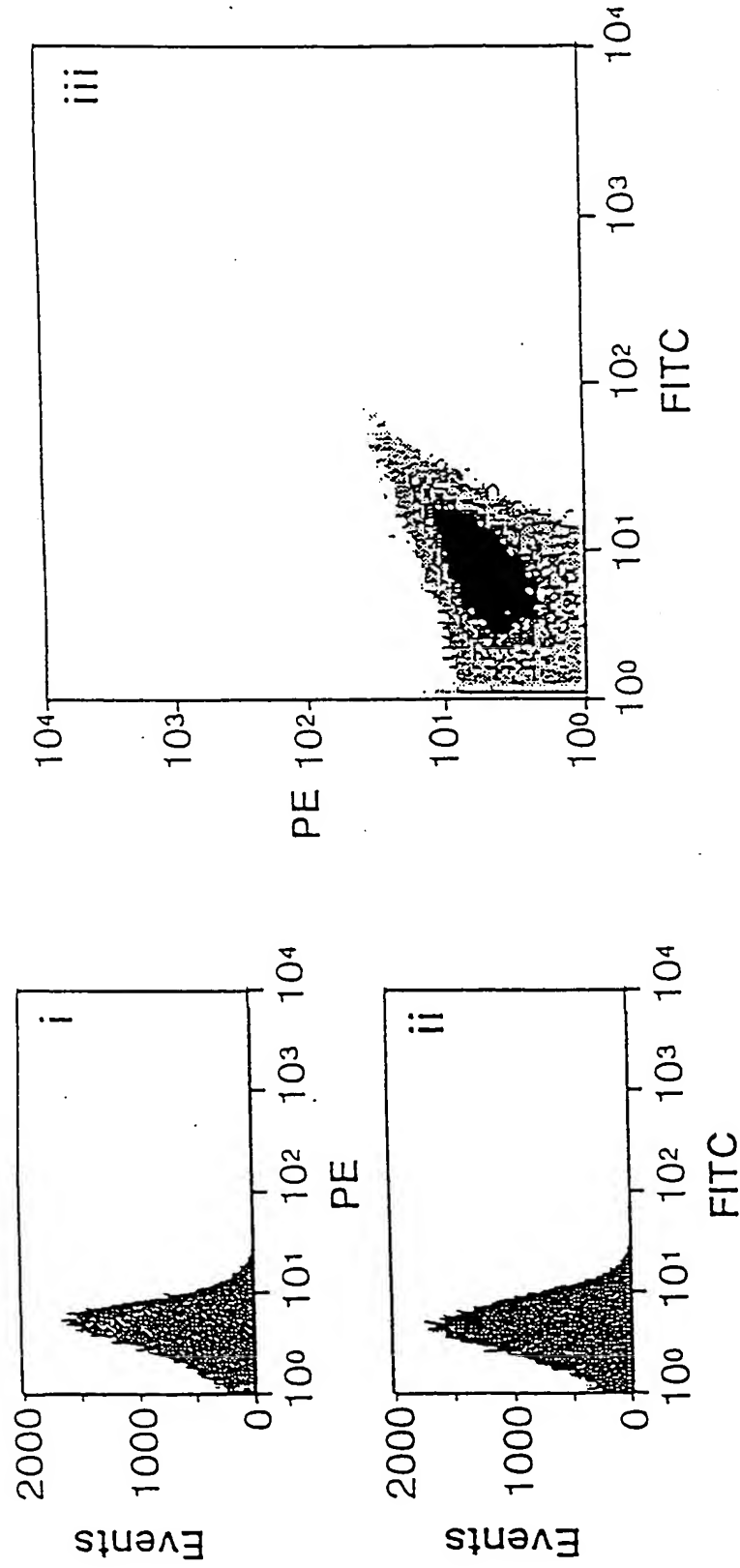


FIG. 9A

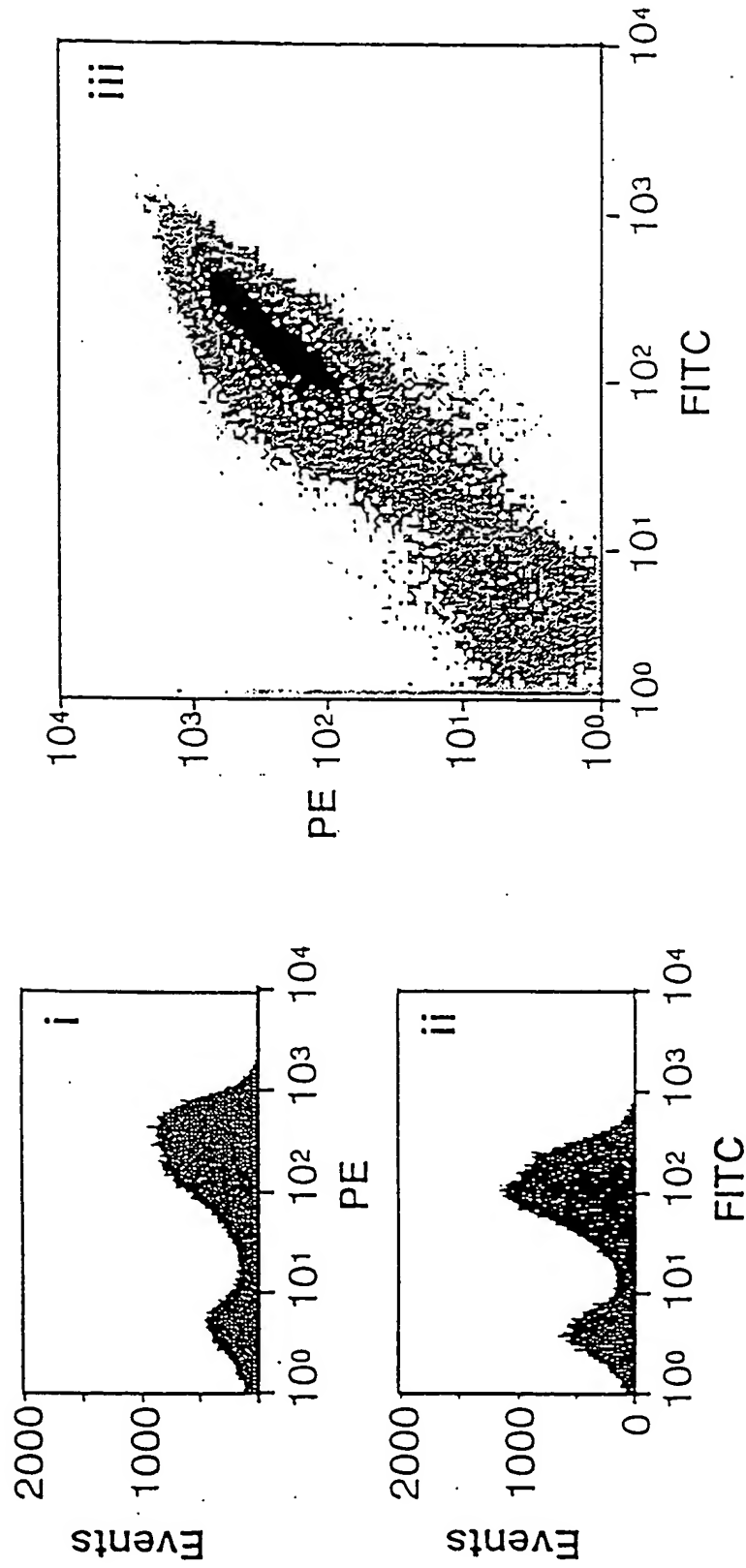


FIG. 9B

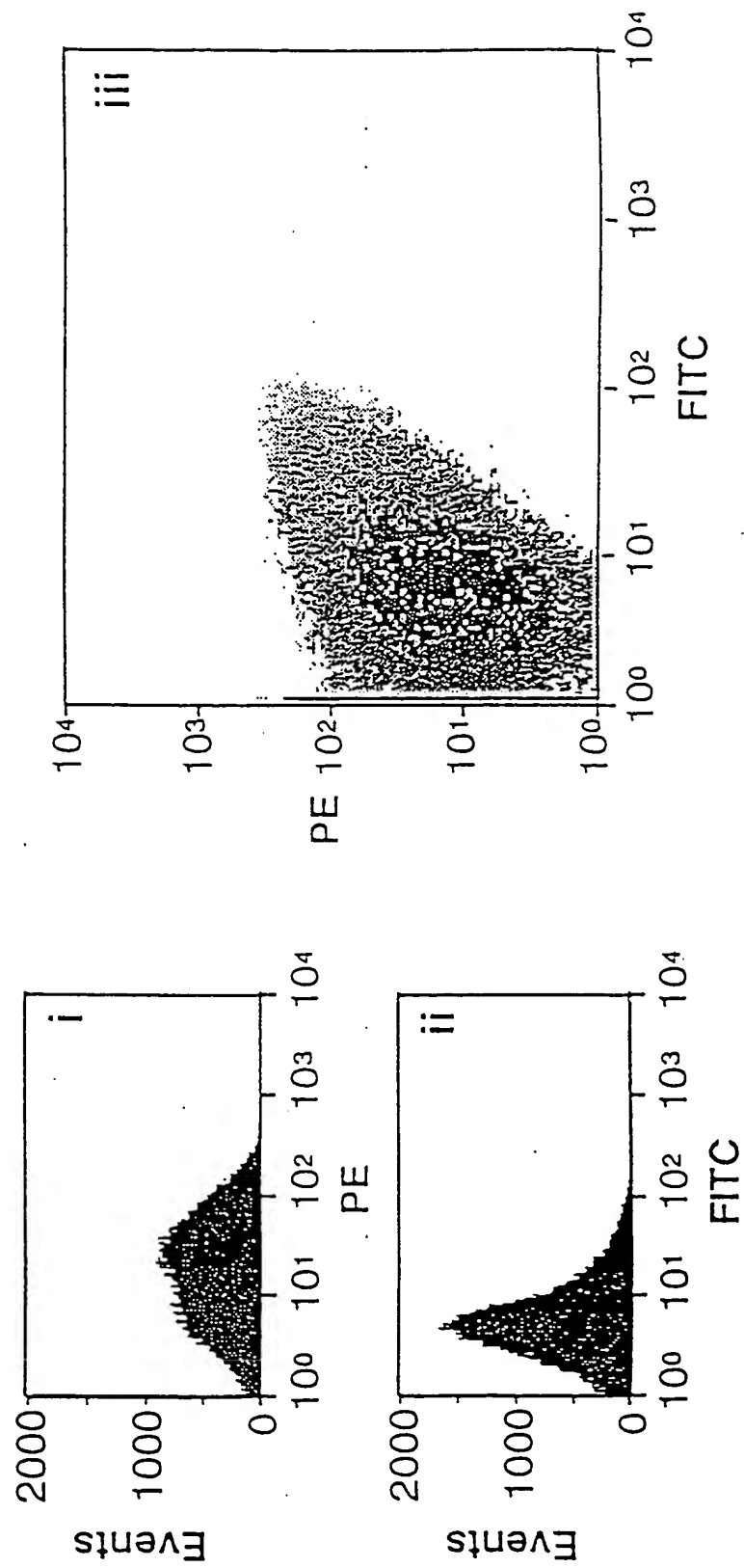


FIG. 9C

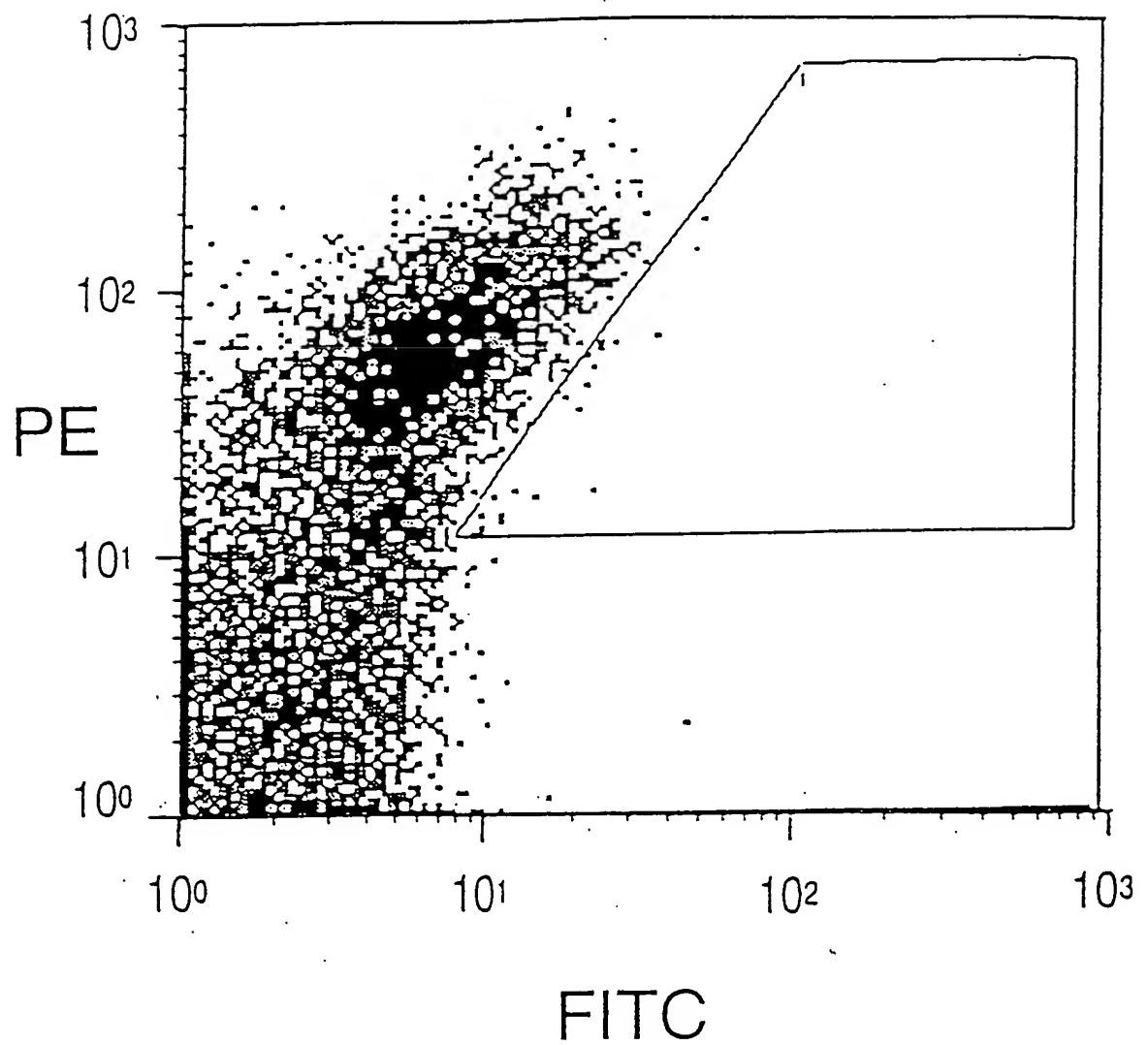


FIG. 10A

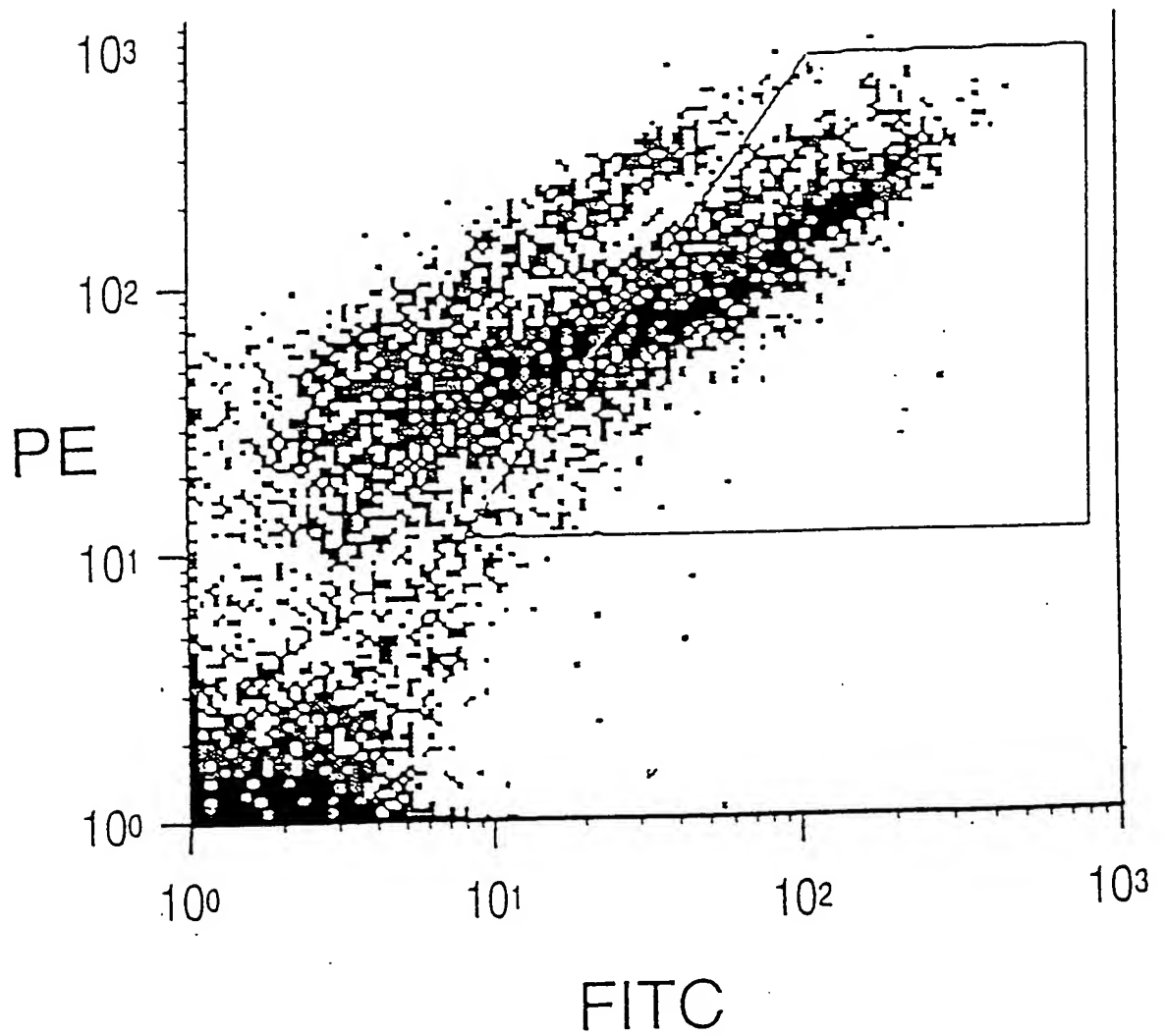


FIG. 10B

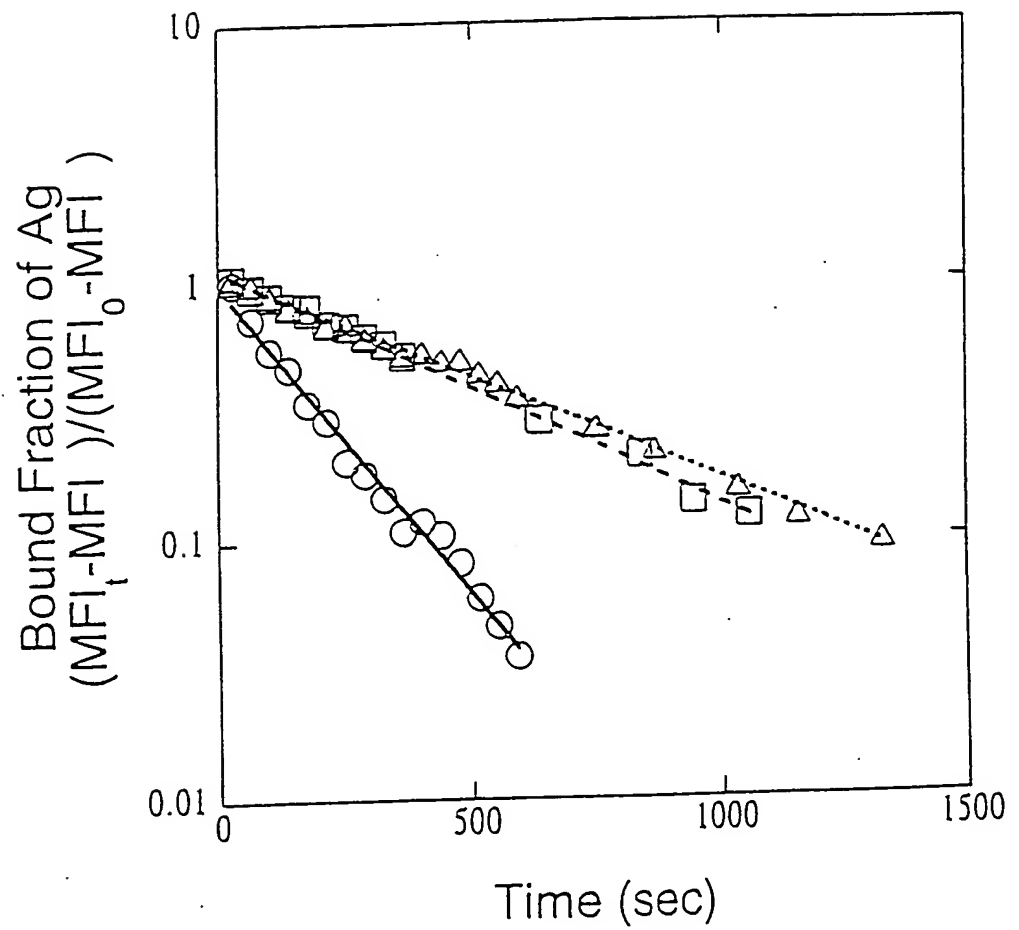


FIG. 11

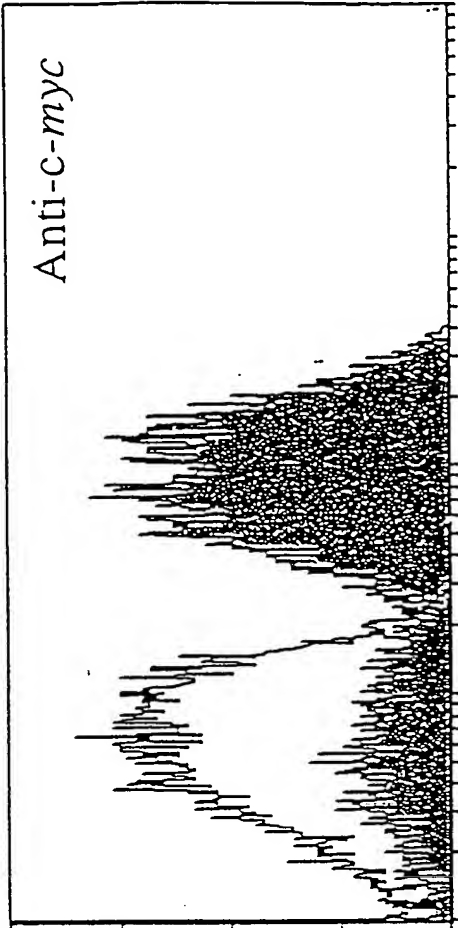


FIG. 12B

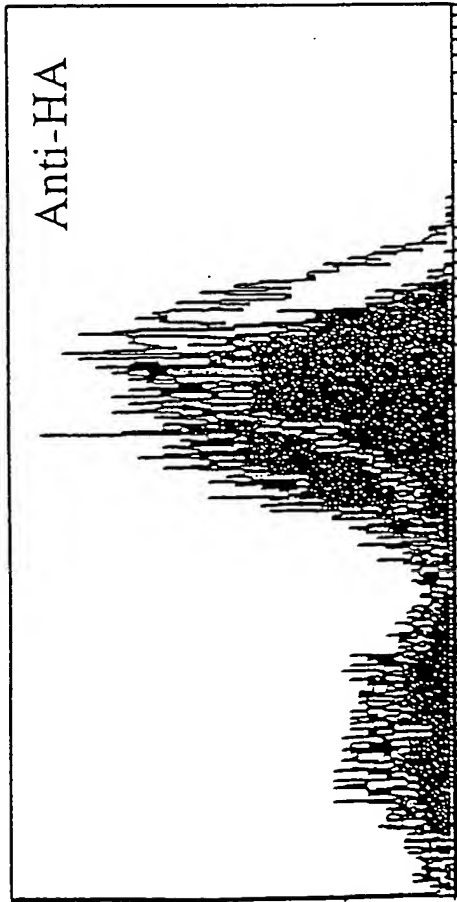


FIG. 12A

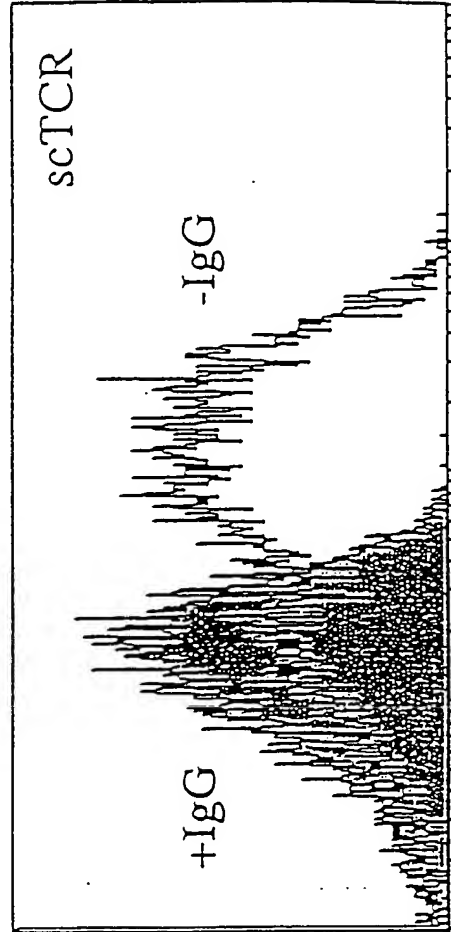


FIG. 12D

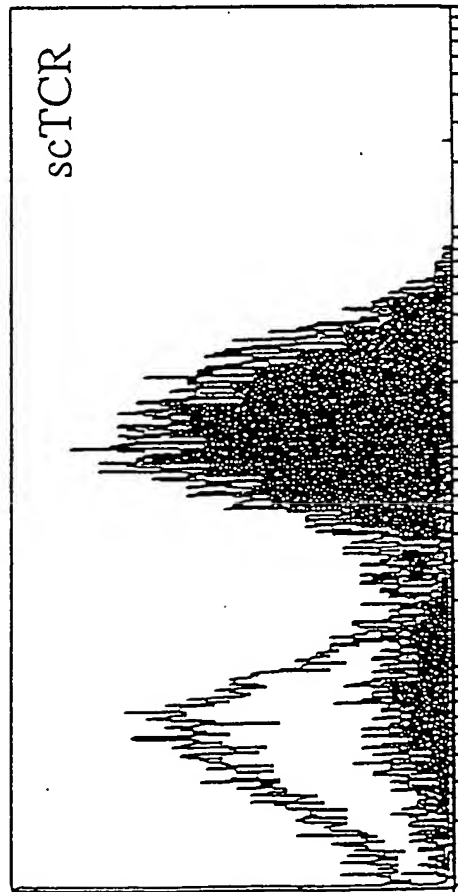


FIG. 12C

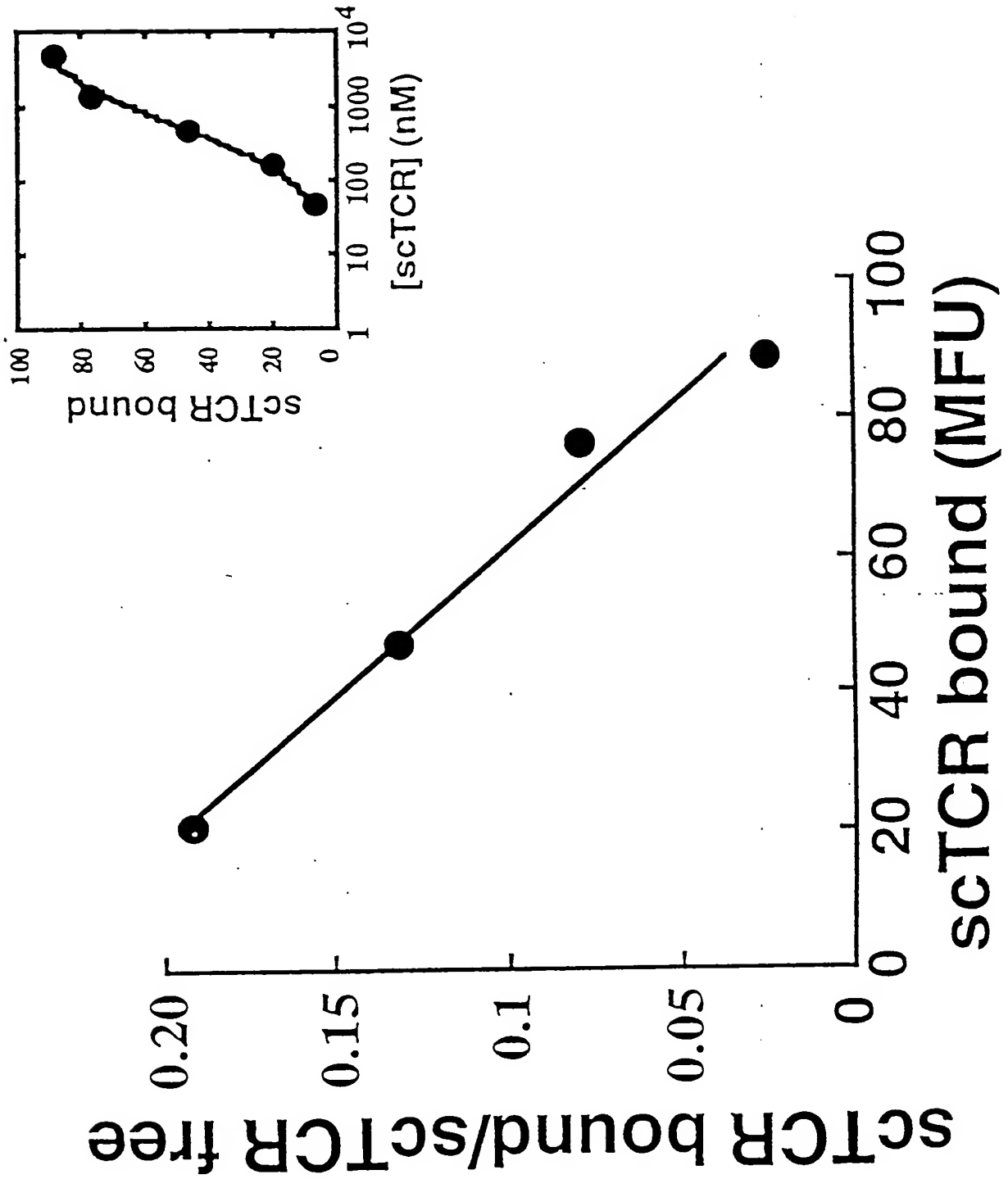


FIG. 13

Yeast Cell Surface Display of Proteins
and Uses Thereof

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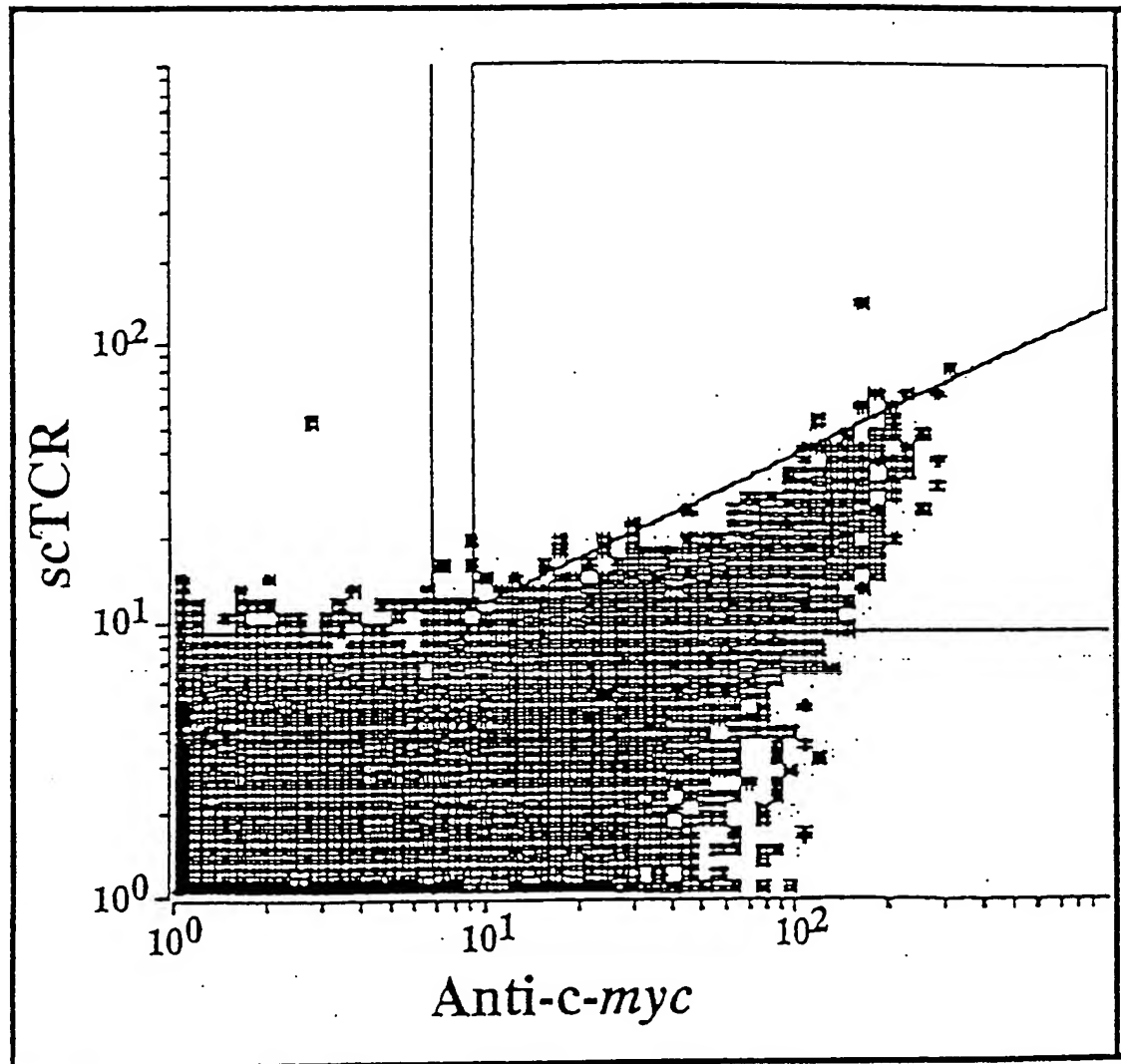


FIG. 14A

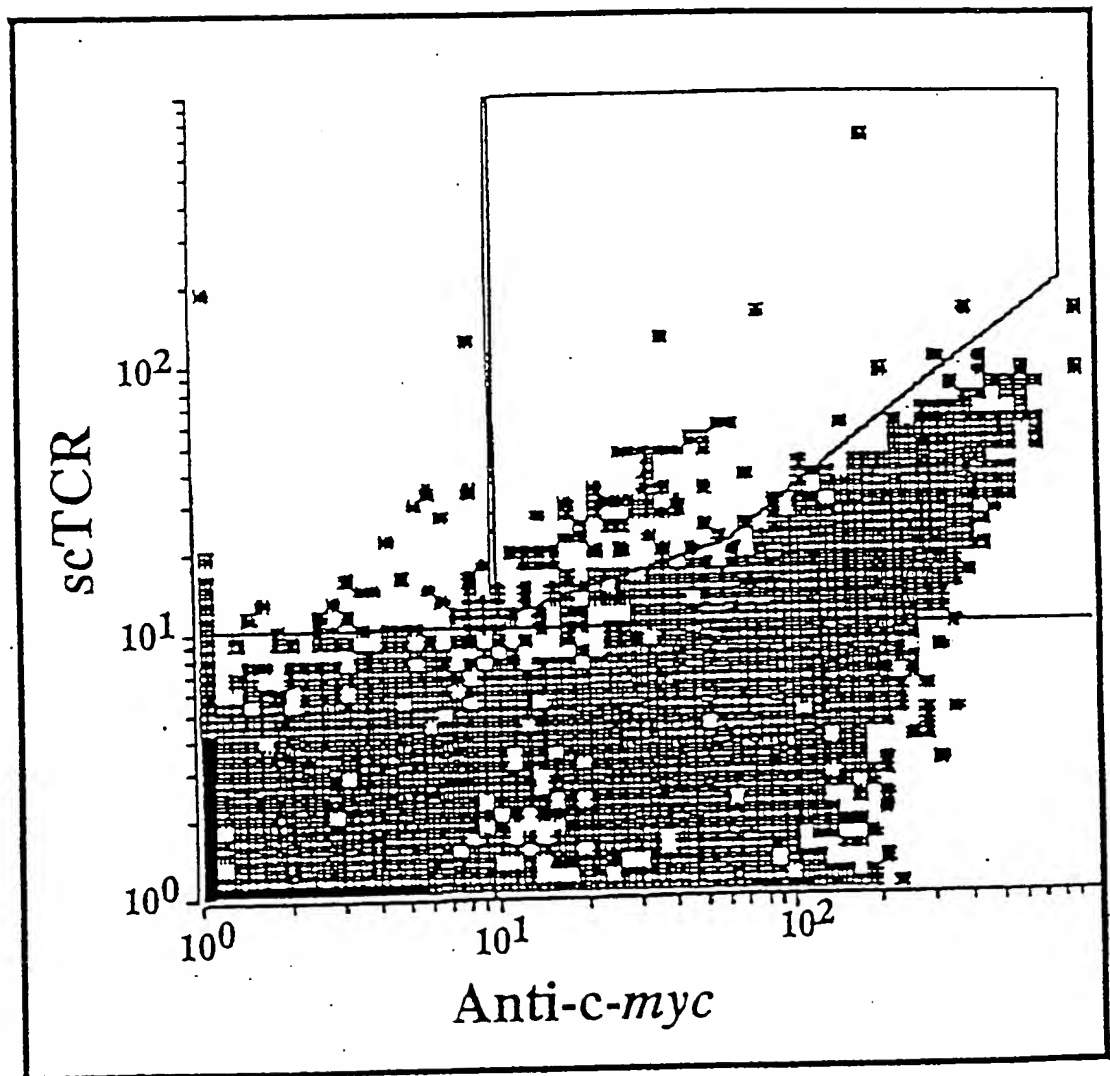


FIG. 14B

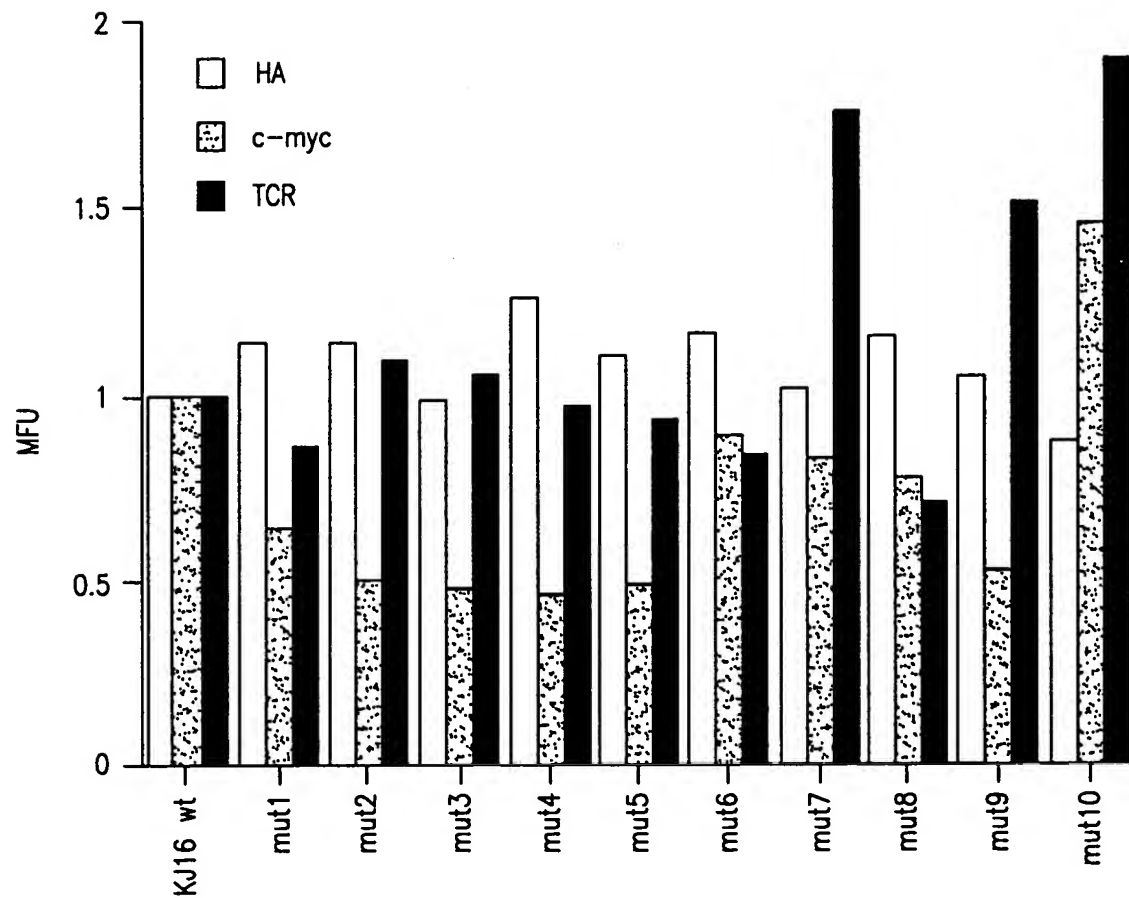
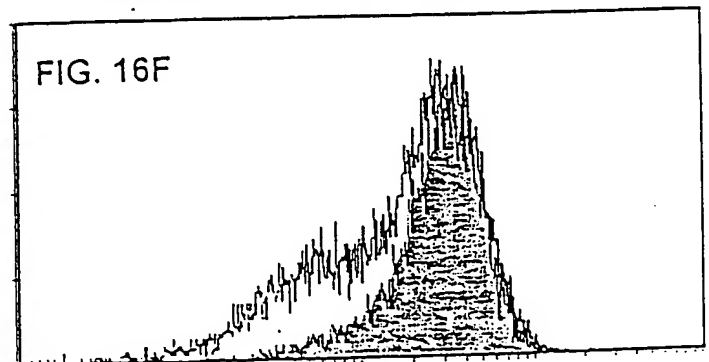
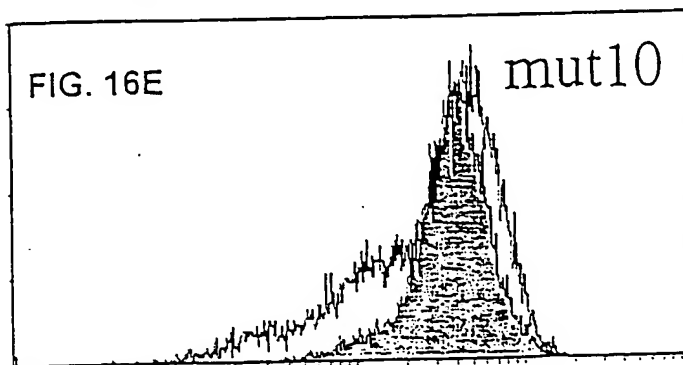
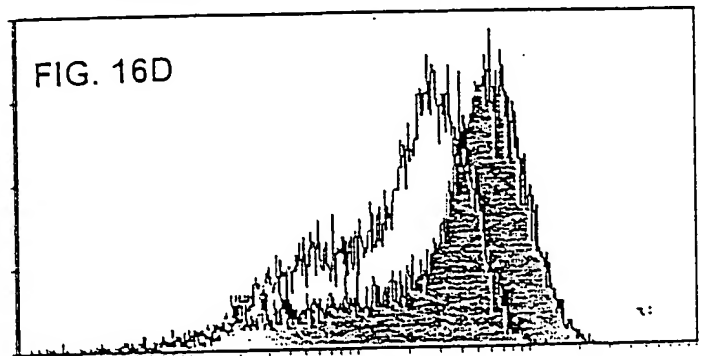
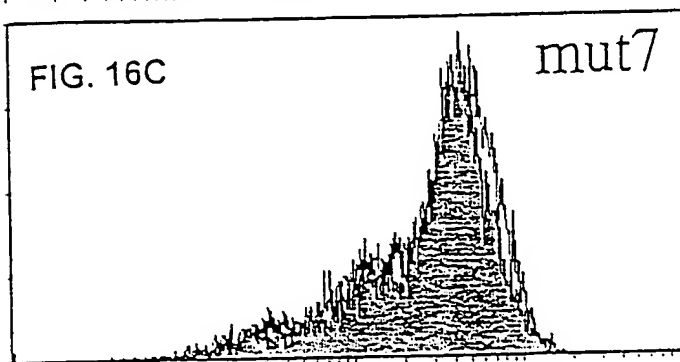
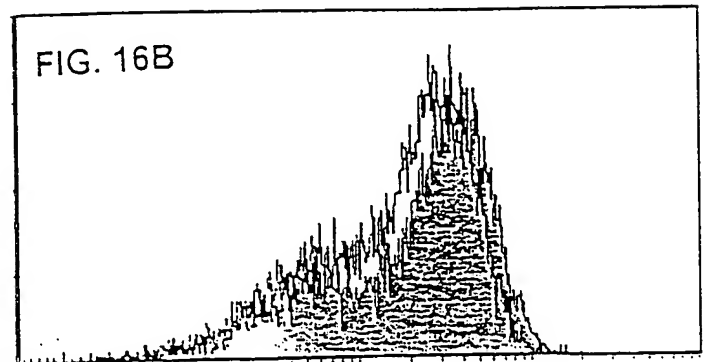
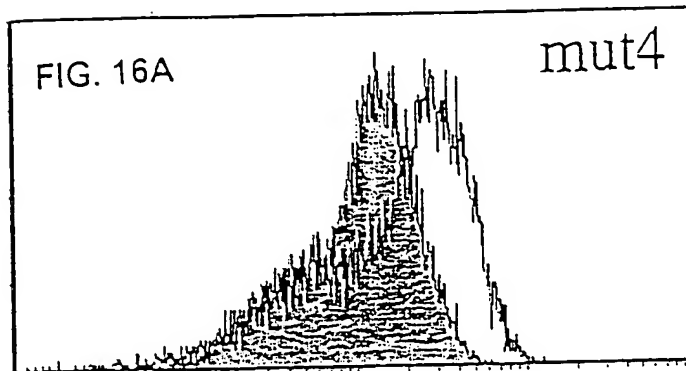


FIG. 15

Anti-c-myc

scTCR



Yeast Cell Surface Display of Proteins
and Uses Thereof

Inventor: Wittrup, et al. Filed: 12/16/03
USSN Not assigned Atty Docket 97-99E

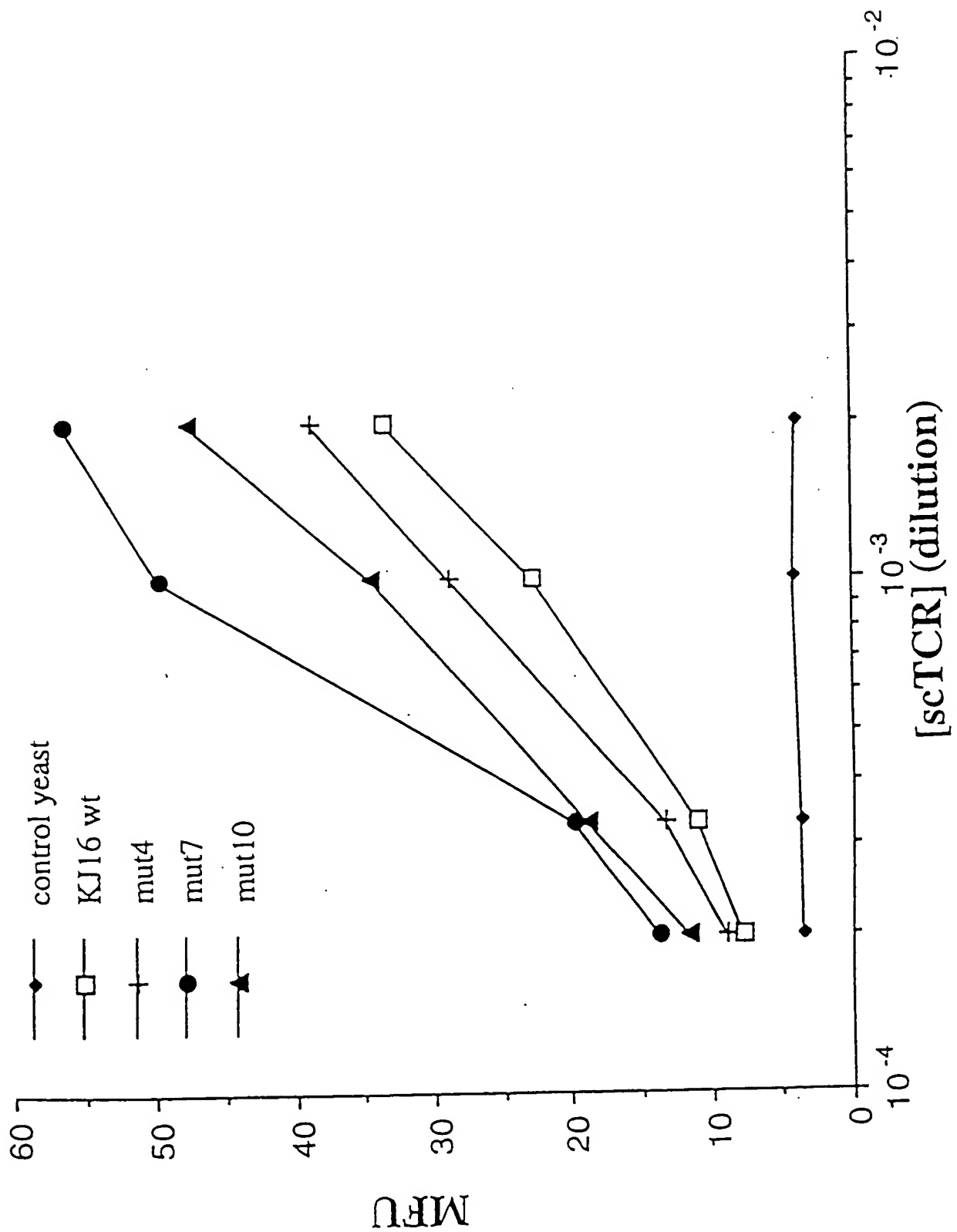


FIG. 17

| | | |
|----------------|----------------|--|
| KJ16 wild-type | V _L | GACGTCCTGGTGACCCAAACTCCTGCCTCCCTGCTCTGCATCTCCGGATGAATC |
| KJ16 mut 4 | | GACGTCCTGGTGACCCAAACTCCTGCCTCCCTGCTCTGCATCTCCGGATGAATC |
| KJ16 mut 7 | | GACGTCCTGGTGACCCAAACTCCTGCCTCCCTGCTCTGCATCTCCGGATGAATC |
| -----CDR1----- | | |
| KJ16 wild-type | | TGTCACCATCACATGCCAGGCAAGCCAGGACATTGGTACTTGGCTTAGTTTGGT |
| KJ16 mut 4 | | TGTCACCATCACATGCCAGGCAAGCCAGGACATTGGTACTTGGCTTAGTTTGGT |
| KJ16 mut 7 | | TGTCACCATCACATGCCAGGCAAGCCAGGACATTGGTACTTGGCTTAGTTTGGT |
| | | ↑ |
| | | S26R |
| -----CDR2----- | | |
| KJ16 wild-type | | ATCAGCAGAAACCAGGGAAATCTCCTCAGCTCCTGGTCTATAGTGCAACTATC |
| KJ16 mut 4 | | ATCAGCAGAAACCAGGGAAATCTCCTCAGCTCCTGGTCTATAGTGCAACTATC |
| KJ16 mut 7 | | ATCAGCAGAAACCAGGGAAATCTCCTCAGCTCCTGGTCTATAGTGCAACTATC |
| ----- | | |
| KJ16 wild-type | | TTGGCAGATGGGGTCCCATCAAGGTTTCAGTGGCAGTAGATCTGGCACACAGTA |
| KJ16 mut 4 | | TTGGCAGATGGGGTCCCATCAAGGTTTCAGTGGCAGTAGATCTGGCACACAGTA |
| KJ16 mut 7 | | TTGGCAGATGGGGTCCCATCAAGGTTTCAGTGGCAGTAAATCTGGCACACAGTA |
| | | ↑ |
| | | R66K |

FIG. 18-1

| | |
|----------------|---|
| KJ16 wild-type | TTCTCTTAAGATCAACAGACTACAGGTTGAAGATAATTGGAACCTATTACTGTC |
| KJ16 mut 4 | TTCTCTTAAGATCAACAGACTACAGGTTGAAGATAATTGGAACCTATTACTGTC |
| KJ16 mut 7 | TTCTCTTAAGATCAACAGACTACAGGTTGAAGATAATTGGAACCTATTACTGTC |
| -----CDR3----- | |
| KJ16 wild-type | TACAGGTTTCTAGTTCTCCGTACACGTTTGGAGCTGGCACCAAGCTGGAGCTC |
| KJ16 mut 4 | TACAGGTTTCTAGTTCTCCGTACACGTTTGGAGCTGGCACCAAGCTGGAGCTC |
| KJ16 mut 7 | TACAGGTTTCTAGTTCTCCGTACACGTTTGGAGCTGGCACCAAGCTGGAGCTC |
| | <div style="display: flex; align-items: center; justify-content: center;"> <div style="margin-right: 10px;"> ✓ ✓ ✓ </div> <div style="border-top: 1px dashed black; width: 100%;"></div> </div> |
| | <div style="display: flex; align-items: center; justify-content: center;"> <div style="margin-right: 10px;">V_H</div> <div style="border-top: 1px dashed black; width: 100%;"></div> <div style="margin-left: 10px;">C-myc</div> </div> |
| KJ16 wild-type | AAACGG.../..TCCTCAGAACAAAGCTTATTTCCTCGAAGAAGATTTGTAGTAA |
| KJ16 mut 4 | AAACGG.../..TCCTCAGAACAAAGAGCTTATTTCCTCGAAGAAGATTTGTAGTAA |
| KJ16 mut 7 | AAACGG.../..TCCTCAGAACAAAGCTTATTTCCTCGAAGAAGATTTGTAGTAA |
| | ↑ K258E |

FIG. 18-2

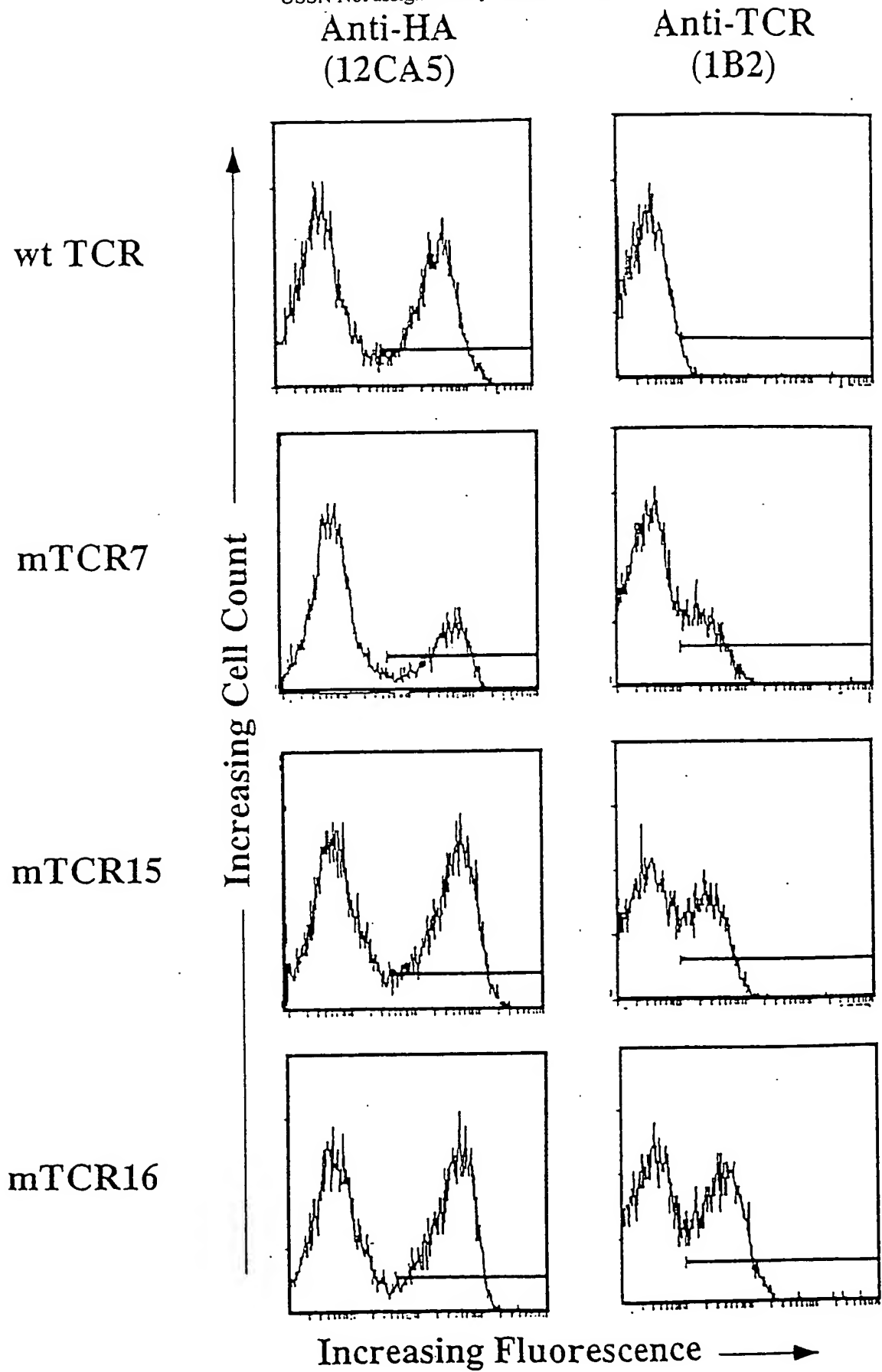


FIG. 19

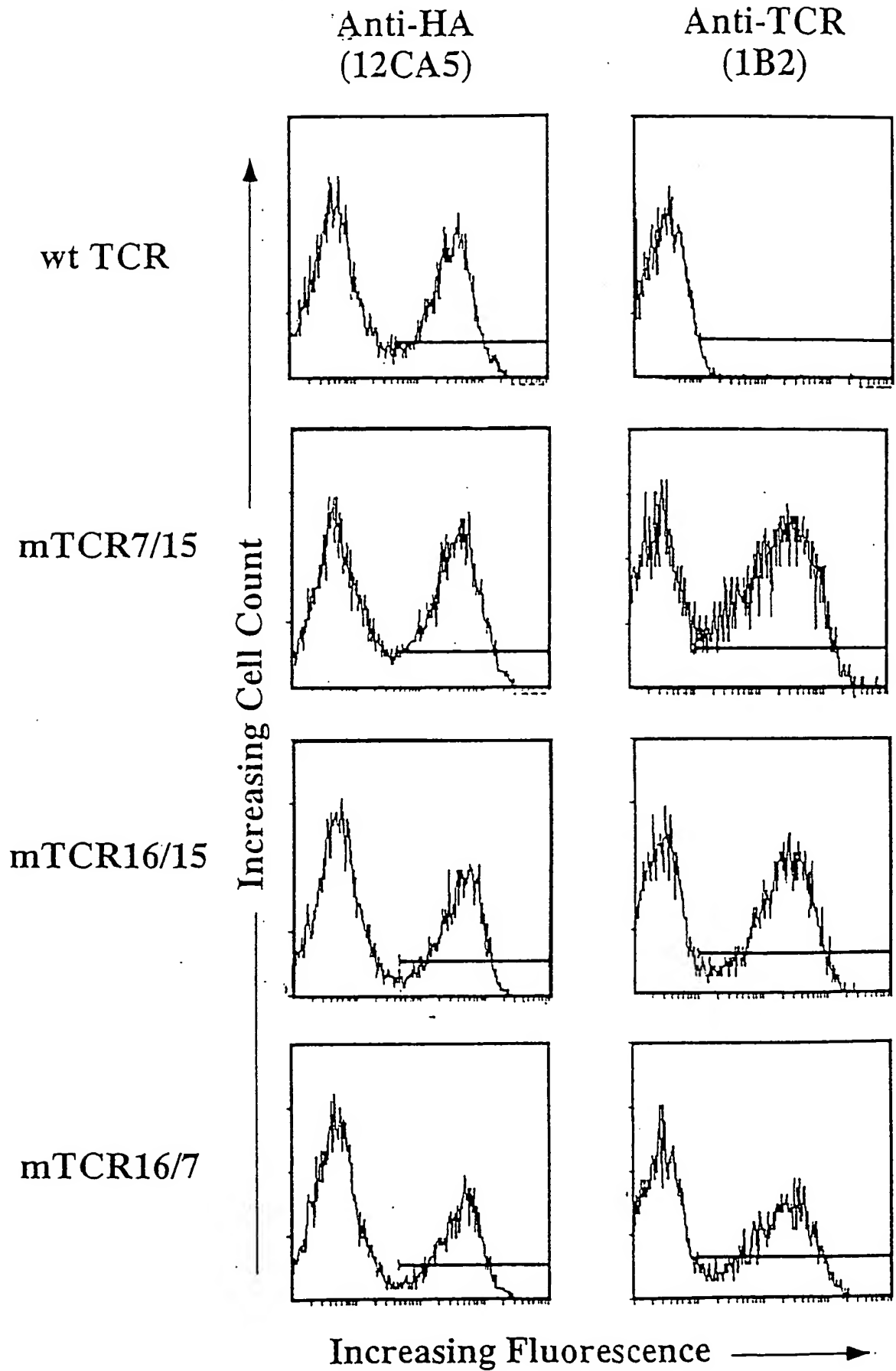


FIG. 20

vβ8.2
GACGTCGCAG TCACCCAAAG CCCAAGAAAC AAGGTGGCAG TAACAGGAGG AAAGGTGACA
Gly17ΔGlu
-----cdr1-----
TTGAGCTGTA ATCAGACTAA TAACCACAAC AACATGTACT GGTATCGGCA GGACACGGGG
-----cdr2-----
CATGGGCTGA GGCTGATCCA TTATTCATAT GGTGCTGGCA GCACTGAGAA AGGAGATATC
-----hv4-----
CCTGATGGAT ACAAGGCCTC CAGACCAAGC CAAGAGAACT TCTCCCTCAT TCTGGAGTTG
-----cdr3-----
GCTACCCCTT CTCAGACATC AGTGTAATTC TGTGCCAGCG GTGGGGGGG CACCTTGTAC
linker
TTTGGTGCGG GCACCCGACT ATCGGTGCTA TCCTCCGCGG ATGATGCTAA GAAGGATGCT
vα3.1
GCTAAGAAGG ATGATGCTAA GAAAGATGAT GCTAAGAAAG ATGCACAGTC AGTGACACAG
CCCGATGCTC GCGTCACTGT CTCTGAAGGA GCCTCTCTGC AGCTGAGATG CAAGTATTCC

FIG. 21-1

```
-----cdr1-----  
TACTCTGCCA CACCTTATCT GTTCTGGTAT GTCCAGTACC CGCGGCAGGG GCTGCAGCTG  
Leu43ΔPro  
-----cdr2-----  
CTCCTCAAGT ACTATTCCGG AGACCCAGTG GTTCAAGGAG TGAATGGCTT TGAGGCTGAG  
-----hv4-----  
TTCAGCAAGA GCAACTCTTC CTTCACCTG CGGAAAGCCT CCGTGCACTG GAGCGACTCG  
-----cdr3-----  
GCTGTGTACT TCTGTGCTGT GAGCGGCTTT GCAAGTGCGC TGACATTGG ATCTGGCACA  
Leu104ΔPro  
AAAGTCATTG TTCTACCATA CATCTAG + 6-His
```

FIG. 21-2